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FIGURE 1. Methionyl tRNA synthetase cloned DNA sequence [SEQ ID NO:1]

- ATGCCTAAAG AAACATTTTA TATAACAACC CCAATATACT ATCCTAGTGG
- GAATITIACAT ATAGGACATG CATATICTAC AGTGGCTGGA GATGTTATIG 51
- CAAGATATAA GAGAATGCAA GGATATGATG TTCGTTATTT GACTGGAACG 101
- GATGAACACG GTCAAAAAT TCAAGAAAAA GCTCAAAAAG CTGGTAAGAC 151
- AGAAATTGAA TATTTGGATG AGATGATTGC TGGAATTAAA CAATTGTGGG 201
- CTAAGCTTGA AATTTCAAAT GATGATTTTA TCAGAACAAC TGAAGAACGT 251
- CATAAACATG TCGTTGAGCA AGTGTTTGAA CGTTTTATTAA AGCAAGGTGA 301
- TAICTAITIA GGIGAATAIG AAGGIIGGIA IICIGIICCG GAIGAAACAI 351

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401	ACTATACAGA	ACTATACAGA GTCACAATTA GTAGACCCAC AATACGAAAA CGGTAAAATT	GTAGACCCAC	AATACGAAAA	CGGTAAAATT
451	ATTGGTGGCA	ATTGGTGGCA AAAGTCCAGA	TTCTGGACAC	TTCTGGACAC GAAGTTGAAC TAGTTAAAGA	TAGTTAAAGA
501	AGAAAGTTAT	AGAAAGTTAT TTCTTTAATA TTAGTAAATA TACAGACCGT TTATTAGAGT	ТТАСТАААТА	TACAGACCGT	TTATTAGAGT
551	TCTATGACCA	TCTATGACCA AAATCCAGAT		TTTATACAAC CACCATCAAG AAAAAATGAA	AAAAAATGAA
601	ATGATTAACA	ATGATTAACA ACTTCATTAA ACCAGGACTT GCTGATTTAG CTGTTTCTCG	ACCAGGACTT	GCTGATTTAG	CTGTTTCTCG
651	TACATCATTT	TACATCATTT AACTGGGGTG		TCCATGTTCC GTCTAATCCA AAACATGTTG	AAACATGTTG
701	TTTATGTTTG	TTTATGTTTG GATTGATGCG TTAGTTAACT ATATTTCAGC ATTAGGCTAT	TTAGTTAACT	ATATTTCAGC	ATTAGGCTAT
751	TTATCAGATG		ATTTAACAAA	ATGAGTCACT ATTTAACAAA TACTGGCCAG CAGATATTCA	CAGATATTCA
0 1			K C C E K C C C E	בם געם בייל אל בייל היל היל היל היל היל היל היל היל היל	EEE

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FIG. 1B

851 901	TATTGATGGC	TATTGATGGC ATTAGACTTA CCGTTACCTA AAAAGTCTT TGCACATGGT TGGATTTTGA TGAAAGATGG AAAAATGAGT AAATCTAAAG GTAATGTTGT	CCGTTACCTA	AAAAGTCTT AAATCTAAAG	TGCACATGGT GTAATGTTGT
951	AGACCCTAAT	AGACCCTAAT ATTTTAATTG ATCGCTATGG TTTAGATGCT ACACGTTATT	ATCGCTATGG	TTTAGATGCT	ACACGTTATT
1001	ATCTAATGCG	ATCTAATGCG TGAATTACCA TTTGGTTCAG ATGGCGTATT TACACCTGAA	TTTGGTTCAG	ATGGCGTATT	TACACCTGAA
1051	GCATTTGTTG	GCATTTGTTG AGCGTACAAA TTTCGATCTA GCAAATGACT TAGGTAACTT	TTTCGATCTA	GCAAATGACT	TAGGTAACTT
1101	AGTAAACCGT	AGTAAACCGT ACGATTTCTA TGGTTAATAA GTACTTTGAT GGCGAATTAC	TGGTTAATAA	GTACTTTGAT	GGCGAATTAC
1151	CAGCGTATCA	CAGCGTATCA AGGTCCACTT	CATGAATTAG ATGAAGAAAT	ATGAAGAAAT	GGAAGCTATG
1201	GCTTTAGAAA	GCTTTAGAAA CAGTGAAAAG	CTACACTGAA	CTACACTGAA AGCATGGAAA GTTTGCAATT	GTTTGCAATT

FIG 1C

1251	TTCTGTGGCA	TTCTGTGGCA TTATCTACGG TATGGAAGTT TATAAGTAGA ACGAATAAGT	TATGGAAGTT	TATAAGTAGA	ACGAATAAGT
1301	ATATTGACGA	ATATTGACGA AACAACGCCT TGGGTATTAG CTAAGGACGA TAGCCAAAAA	TGGGTATTAG	CTAAGGACGA	TAGCCAAAAA
1351	GATATGTTAG	GATATGTTAG GCAATGTAAT GGCTCACTTA GTTGAAAATA	GGCTCACTTA	GTTGAAAATA	TTCGTTATGC ·
1401	AGCTGTATTA	AGCTGTATTA TTACGTCCAT TCTTAACACA TGCGCCGAAA GAGATTTTTG	TCTTAACACA	TGCGCCGAAA	GAGATTTTG
1451	AACAATTGAA	AACAATTGAA CATAAACAAT CCTCAATTTA TGGAATTTAG TAGTTTAGAG	CCTCAATTTA	TGGAATTTAG	TAGTTTAGAG
1501	CAATATGGTG TGCTTACTGA GTCAATTATG GTTACTGGGC AACCTAAACC	TGCTTACTGA	GTCAATTATG	GTTACTGGGC	AACCTAAACC
1551	TATTTCCCA	TATTTTCCCA AGATTGGATA GCGAAGCGGA AATTGCATAT ATCAAAGAAT	GCGAAGCGGA	AATTGCATAT	ATCAAAGAAT
1601	CAATGCAACC	CAATGCAACC GCCTGCTACT GAAGAGGAAA AAGAAGAGAT TCCTAGCAAA	GAAGAGGAAA	AAGAAGAGAT	TCCTAGCAAA
1651	CCTCAAATTG	CCTCAAATTG ATATTAAAGA CTTTGATAAA GTTGAAATTA AGGCAGCAAC	CTTTGATAAA	GTTGAAATTA	AGGCAGCAAC

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FIG 1D

GATTATTGAT GCTGAACATG TTAAGAAGTC AGATAAGCTT TTAAAAATTC 1701

AAGTAGACTT AGATTCTGAA CAAAGACAAA TTGTATCAGG AATTGCCAAA 1751

TTCTATACAC CAGATGATAT TATTGGTAAA AAAGTAGCAG TTGTTACTAA 1801

CCTGAAACCA GCTAAATTAA TGGGACAAAA ATCTGAAGGT ATGATATTAT 1851

CTGCTGAAAA AGATGGTGTA TTAACCTTAG TAAGTTTACC AAGTGCAATT 1901

1951 ССАААТССТС САСТСАТТАА АТАА

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FIGURE 2. Methionyl tRNA synthetase deduced amino acid sequence [SEQ ID NO:2]

- MAKETFYITT PIYYPSGNLH IGHAYSTVAG DVIARYKRMQ GYDVRYLTGT
- DEHGQKIQEK AQKAGKTEIE YLDEMIAGIK QLWAKLEISN DDFIRTTEER 51
- HKHVVEQVFE RLLKQGDIYL GEYEGWYSVP DETYYTESQL VDPQYENGKI 101
- IGGKSPDSGH EVELVKEESY FFNISKYTDR LLEFYDQNPD FIQPPSRKNE 151
- MINNFIKPGL ADLAVSRTSF NWGVHVPSNP KHVVYVWIDA LVNYISALGY 201
- LSDDESLFNK YWPADIHLMA KEIVRFHSII WPILLMALDL PLPKKVFAHG 251
- WILMKDGKMS KSKGNVVDPN ILIDRYGLDA TRYYLMRELP FGSDGVFTPE 301
- AFVERTNFDL ANDLGNLVNR TISMVNKYFD GELPAYQGPL HELDEEMEAM 351
- ALETVKSYTE SMESLQFSVA LSTVWKFISR TNKYIDETTP WVLAKDDSQK 401

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FIG 2A

DMLGNVMAHL VENIRYAAVL LRPFLTHAPK EIFEQLNINN PQFMEFSSLE 451

QYGVLTESIM VTGQPKPIFP RLDSEAEIAY IKESMQPPAT EEEKEEIPSK

501

PQIDIKDFDK VEIKAATIID AEHVKKSDKL LKIQVDLDSE QRQIVSGIAK 551

FYTPDDIIGK KVAVVTNLKP AKLMGQKSEG MILSAEKDGV LTLVSLPSAI 601

651 PNGAVIK